



PATENT ABSTRACTS OF JAPAN

(11) Publication number: **04021718 A**(43) Date of publication of application: **24.01.1992**

(51) Int. Cl. **C21D 8/00**
 C22C 38/00, C22C 38/14

(21) Application number: **02124441**(22) Date of filing: **15.05.1990**(71) Applicant: **NIPPON STEEL CORP**(72) Inventor: **ASAHI HITOSHI**

(54) **PRODUCTION OF HIGH STRENGTH STEEL
 EXCELLENT IN SULFIDE STRESS CRACKING
 RESISTANCE**

(57) Abstract:

PURPOSE: To produce a high strength steel excellent in sulfide stress cracking resistance property by subjecting a steel having a specific composition consisting of C, Si, Mn, P, S, N, Mo, Nb, Ti, Al, B, and Fe to hot rolling and then to respectively specified heat treatment and working.

CONSTITUTION: A steel having a composition which consists of 0.15-0.35% C, 0.05-0.50% Si, 0.20-1.0%

Mn, $\leq 0.015\%$ P, $\leq 0.010\%$ S, $\leq 0.008\%$ N, 0.10-0.80% Mo, 0.010-0.050% Nb, $\leq 0.028\%$ Ti, 0.005-0.10% Al, 0.0005-0.0025% B, and the balance essentially Fe and further contains, if necessary, $\leq 1.5\%$ Cr and in which $-0.005 \leq \text{Ti}-3.4\text{N} \leq 0.01\%$ is satisfied is hot-rolled. Directly after the above or after reheating to a temp. in the austenite region, the steel is worked at 950-700°C at 15-40% reduction of area. Then, this steel is hardened and successively tempered at 580-720°C. By this method, the high strength steel having high sulfide stress cracking resistance property can be obtained at a low cost.

COPYRIGHT: (C)1992,JPO&Japio